Fig. 1A

```
   1  CACTCACACACCTACGGACACACGCTACTCTGGGAGGTGATTTGCGACTTAGCCAGGCCC   60

  61  CCAAAGCTGGGCTCCTGTAGGGAGAAAGTCTGCCCAGGTCCACATCCAAGCCTTCATCGT  120

 121  TTGTCCTCCGGGTTCTGGGATCCTGCTGGAAGAGGGGAGCTTCTGCAATGGGAGTTGCCA  180
   1                                                  M  G  V  A  T    5

 181  CAACCCTGCAGCCCCCAACCACTTCCAAAACCTTGCAGAAGCAGCATCTAGAAGCAGTGG  240
   6    T  L  Q  P  P  T  T  S  K  T  L  Q  K  Q  H  L  E  A  V  G   25

 241  GCGCCTACCAATATGTGCTCACTTTCCTCTTCATGGGCCCTTTCTTCTCCCTTCTTGTCT  300
  26    A  Y  Q  Y  V  L  T  F  L  F  M  G  P  F  F  S  L  L  V  F   45

 301  TTGTCCTCCTCTTCACGTCACTCTGGCCCTTCTCTGTTTTTTACTTGGTGTGGCTCTATG  360
  46    V  L  L  F  T  S  L  W  P  F  S  V  F  Y  L  V  W  L  Y  V   65

 361  TGGACTGGGACACACCCAACCAAGGTGGAAGGCGTTCGGAGTGGATAAGGAACCGGGCAA  420
  66    D  W  D  T  P  N  Q  G  G  R  R  S  E  W  I  R  N  R  A  I   85

 421  TTTGGAGACAACTAAGGGATTATTATCCTGTCAAGCTGGTGAAAACAGCAGAGCTGCCCC  480
  86    W  R  Q  L  R  D  Y  Y  P  V  K  L  V  K  T  A  E  L  P  P  105

 481  CGGATCGGAACTACGTGCTGGGCGCCCACCCTCATGGGATCATGTGTACAGGCTTCCTCT  540
 106    D  R  N  Y  V  L  G  A  H  P  H  G  I  M  C  T  G  F  L  C  125

 541  GTAATTTCTCCACCGAGAGCAATGGCTTCTCCCAGCTCTTCCCGGGGCTCCGGCCCTGGT  600
 126    N  F  S  T  E  S  N  G  F  S  Q  L  F  P  G  L  R  P  W  L  145

 601  TAGCCGTGCTGGCTGGCCTCTTCTACCTCCCGGTCTATCGCGACTACATCATGTCCTTTG  660
 146    A  V  L  A  G  L  F  Y  L  P  V  Y  R  D  Y  I  M  S  F  G  165

 661  GACTCTGTCCGGTGAGCCGCCAGAGCCTGGACTTCATCCTGTCCCAGCCCCAGCTCGGGC  720
 166    L  C  P  V  S  R  Q  S  L  D  F  I  L  S  Q  P  Q  L  G  Q  185

 721  AGGCCGTGGTCATCATGGTGGGGGGTGCGCACGAGGCCCTGTATTCAGTCCCCGGGGAGC  780
 186    A  V  V  I  M  V  G  G  A  H  E  A  L  Y  S  V  P  G  E  H  205

 781  ACTGCCTTACGCTCCAGAAGCGCAAAGGCTTCGTGCGCCTGGCGCTGAGGCACGGGGCGT  840
 206    C  L  T  L  Q  K  R  K  G  F  V  R  L  A  L  R  H  G  A  S  225

 841  CCCTGGTGCCCGTGTACTCCTTTGGGGAGAATGACATCTTTAGACTTAAGGCTTTTGCCA  900
 226    L  V  P  V  Y  S  F  G  E  N  D  I  F  R  L  K  A  F  A  T  245

 901  CAGGCTCCTGGCAGCATTGGTGCCAGCTCACCTTCAAGAAGCTCATGGGCTTCTCTCCTT  960
 246    G  S  W  Q  H  W  C  Q  L  T  F  K  K  L  M  G  F  S  P  C  265

 961  GCATCTTCTGGGGTCGCGGTCTCTTCTCAGCCACCTCCTGGGGCCTGCTGCCCTTTGCTG 1020
 266    I  F  W  G  R  G  L  F  S  A  T  S  W  G  L  L  P  F  A  V  285
```

Fig. 1B

```
1021  TGCCCATCACCACTGTGGTGGGCCGCCCCATCCCCGTCCCCCAGCGCCTCCACCCCACCG  1080
 286    P  I  T  T  V  V  G  R  P  I  P  V  P  Q  R  L  H  P  T  E   305

1081  AGGAGGAAGTCAATCACTATCACGCCCTCTACATGACGGCCCTGGAGCAGCTCTTCGAGG  1140
 306    E  E  V  N  H  Y  H  A  L  Y  M  T  A  L  E  Q  L  F  E  E   325

1141  AGCACAAGGAAAGCTGTGGGGTCCCCGCTTCCACCTGCCTCACCTTCATCTAGGCCTGGC  1200
 326    H  K  E  S  C  G  V  P  A  S  T  C  L  T  F  I               341

1201  CGCGGCCTTTCGCTGAGCCCCTGAGCCCAAGGCACTGAGACCTCCACCCACTGTGGACTC  1260

1261  CATGCCTCCAATAAAAGGTAGTTCTGGGCCCAGCGCAGTGCCTCGTGCCTGTGATCCCAG  1320

1321  CACTTTGGGAGGCCAGGGTGGGAGGATCGTTTGAGCCCAGGAGTTGAAGACCAGCCTGGG  1380

1381  CAACACAGTGAGACTTCATTTCTACAAAAAAAAAAAAAAA  1420
```

Fig.2: Alignment of Predicted Human MGAT3 with its Homologues

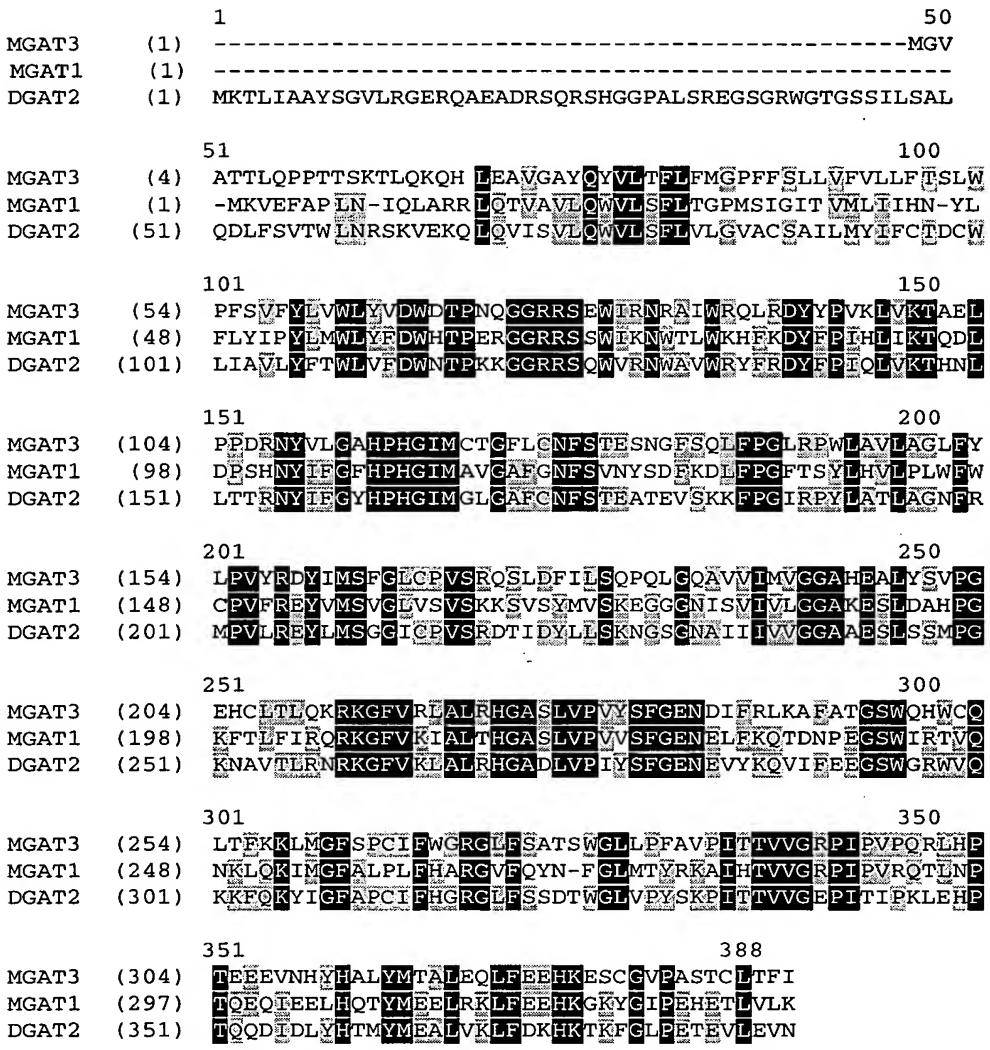

Fig.3 Hydrophobicity Analysis of MGAT3

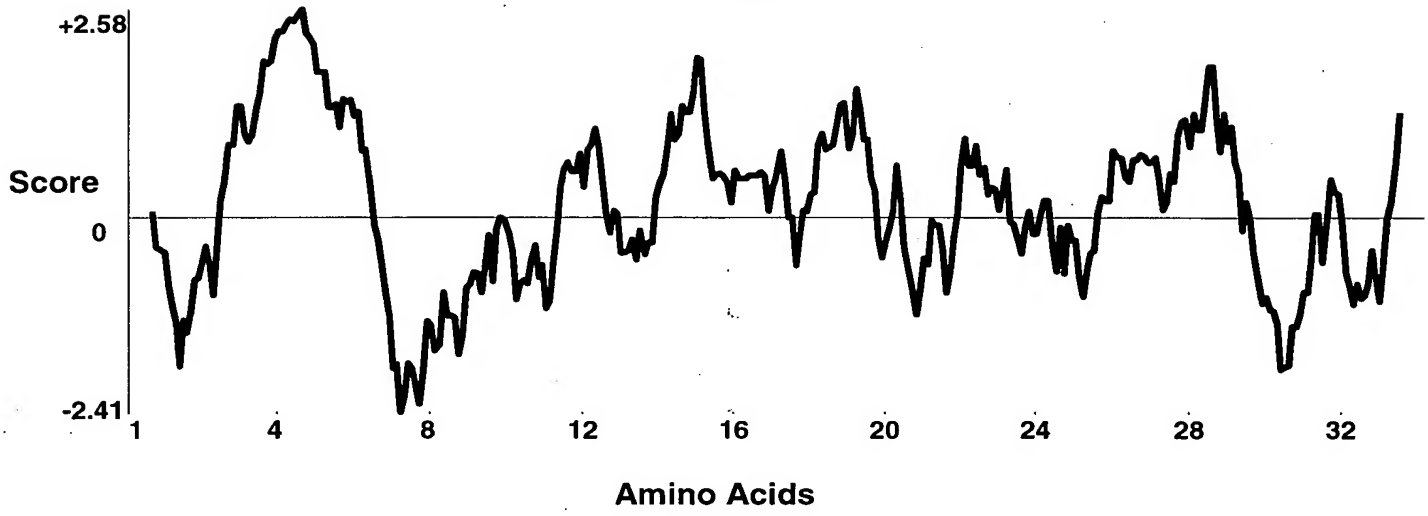

Fig. 4 Expression of Recombinant MGAT3

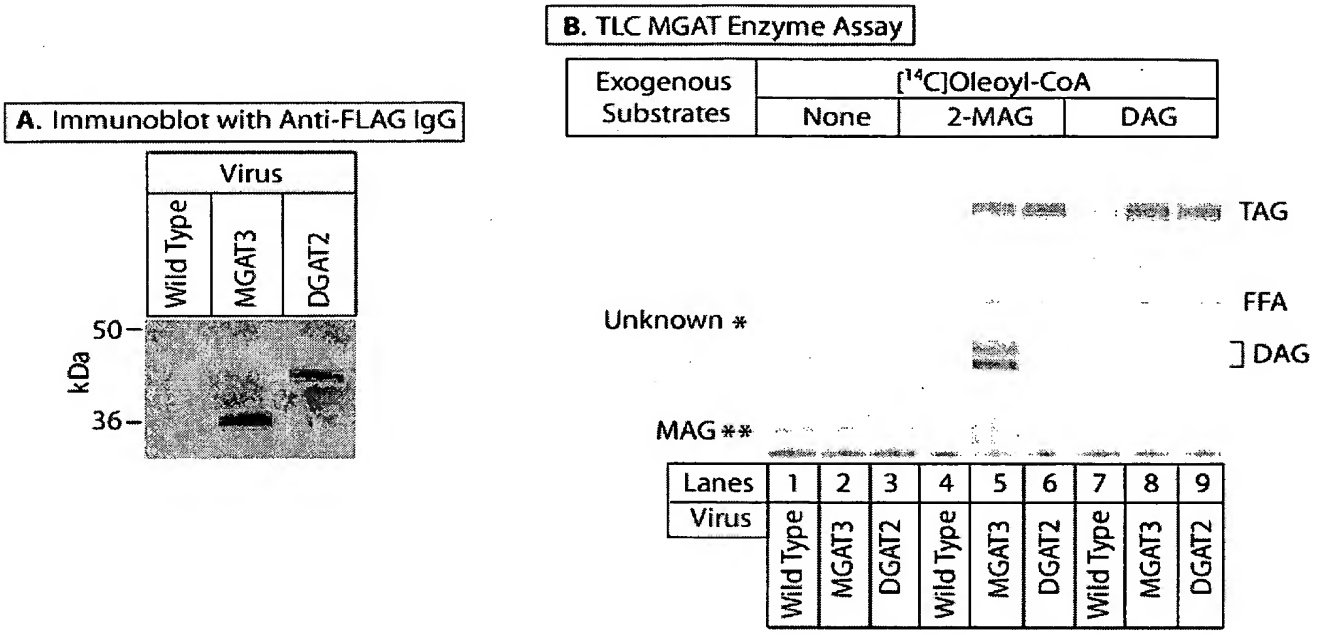

Fig.5 Time Course of Expression

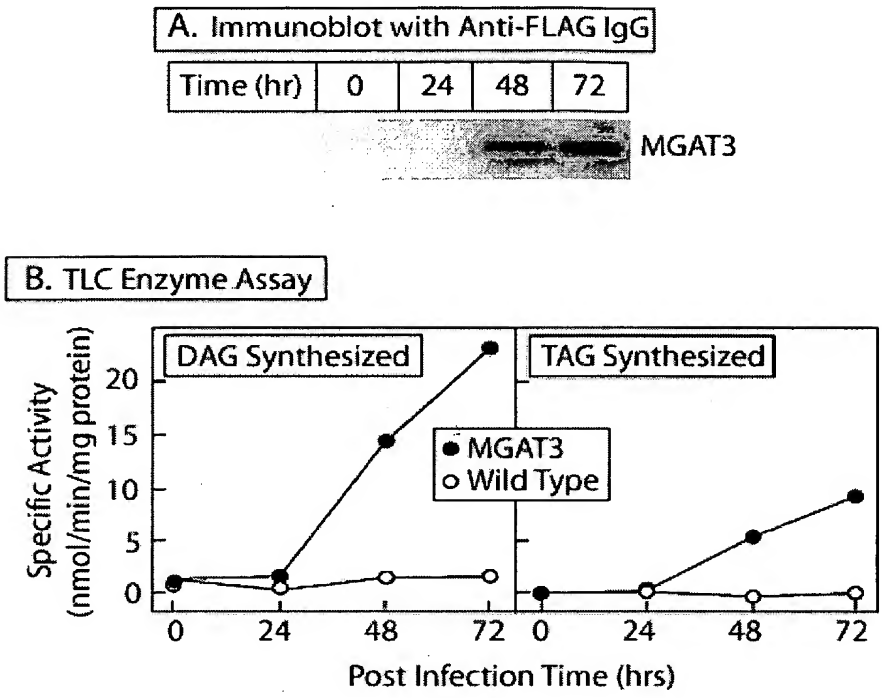

Fig.6 Substrate Concentration Curve

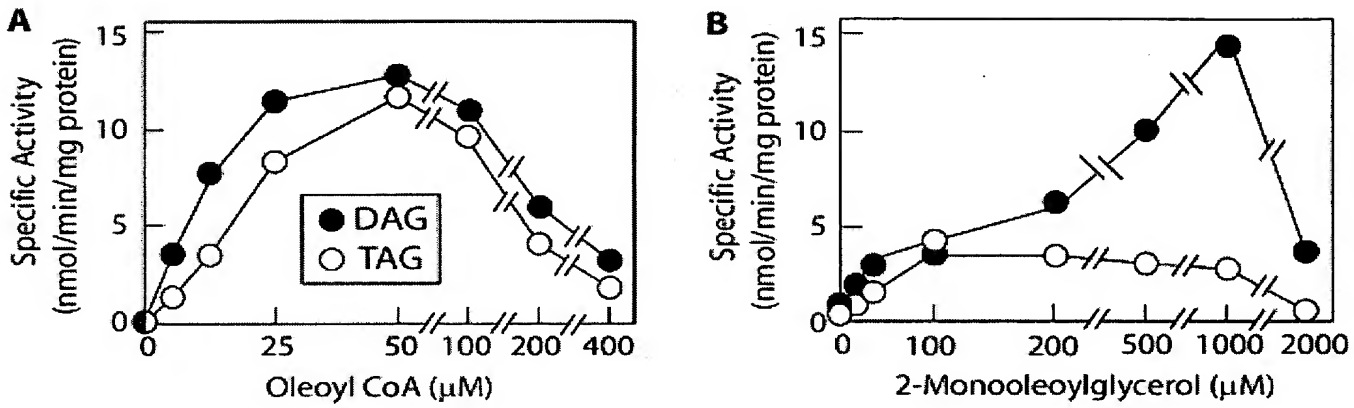

Fig.7 Substrate Specificity

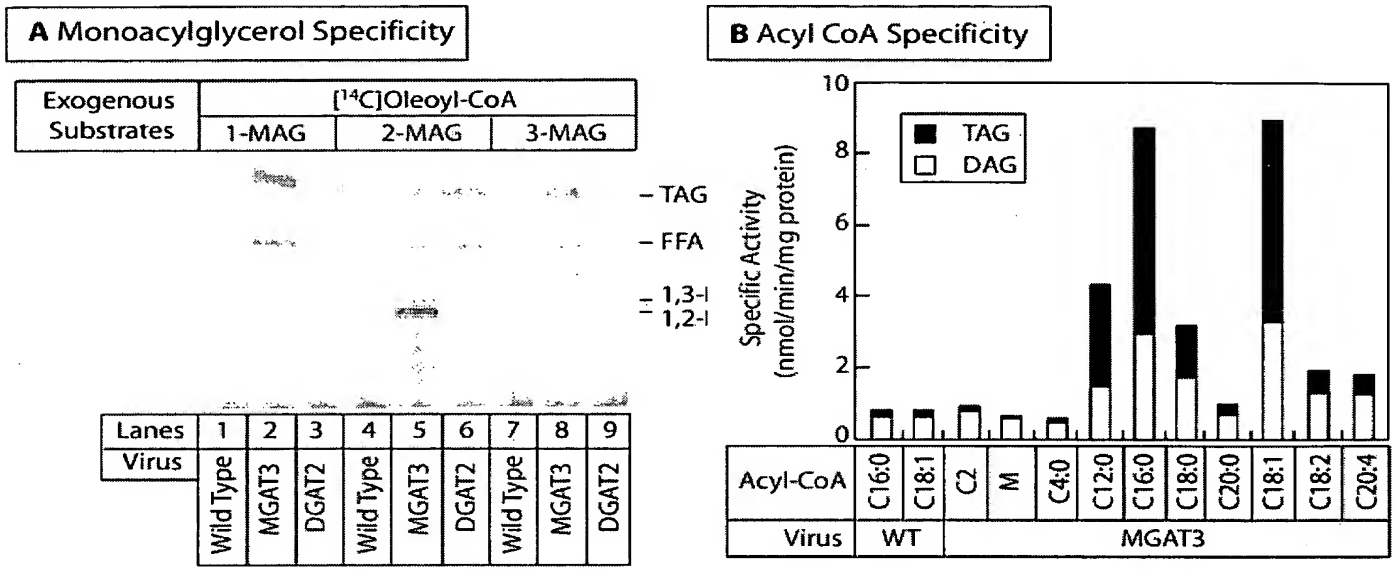

Fig.8 Relative Expression of MGAT3 in Normal Tissues

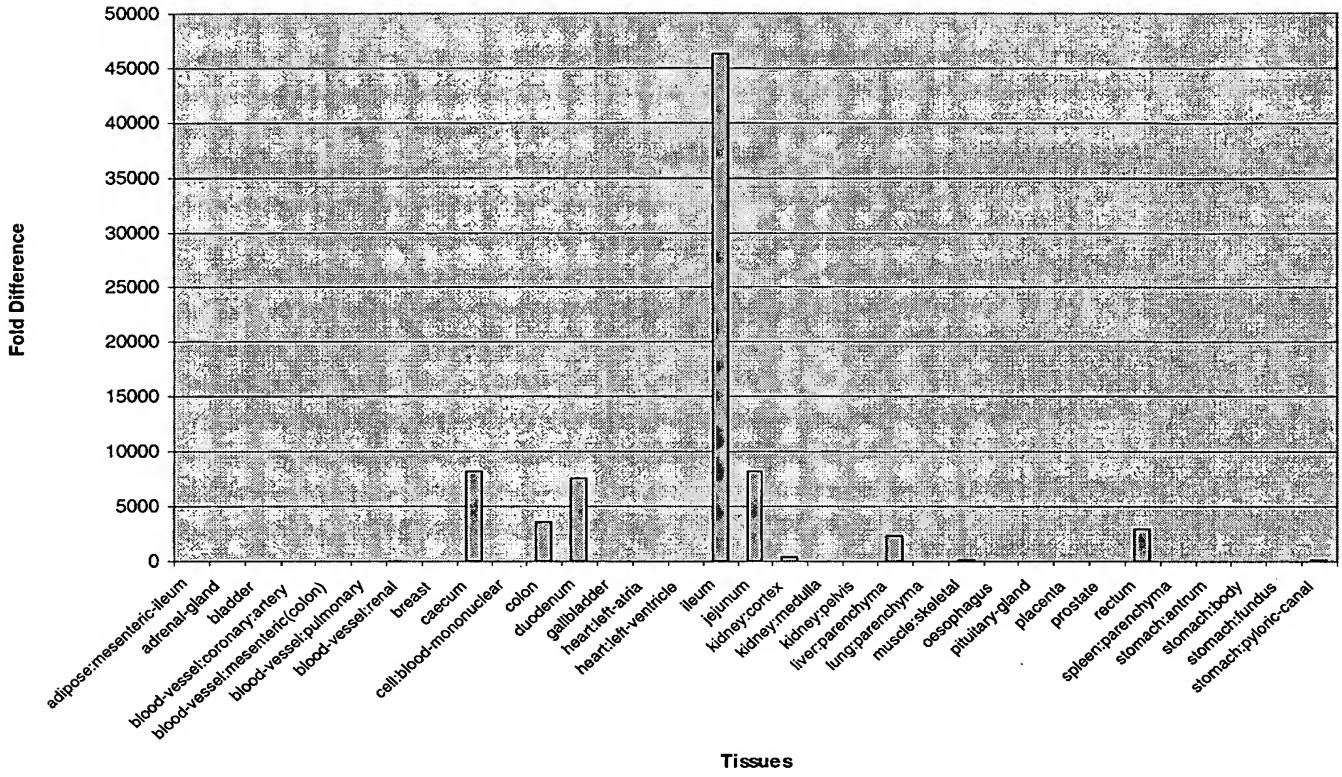

Fig.9 Relative expression of MGAT3 in Crohn's and control Ileum

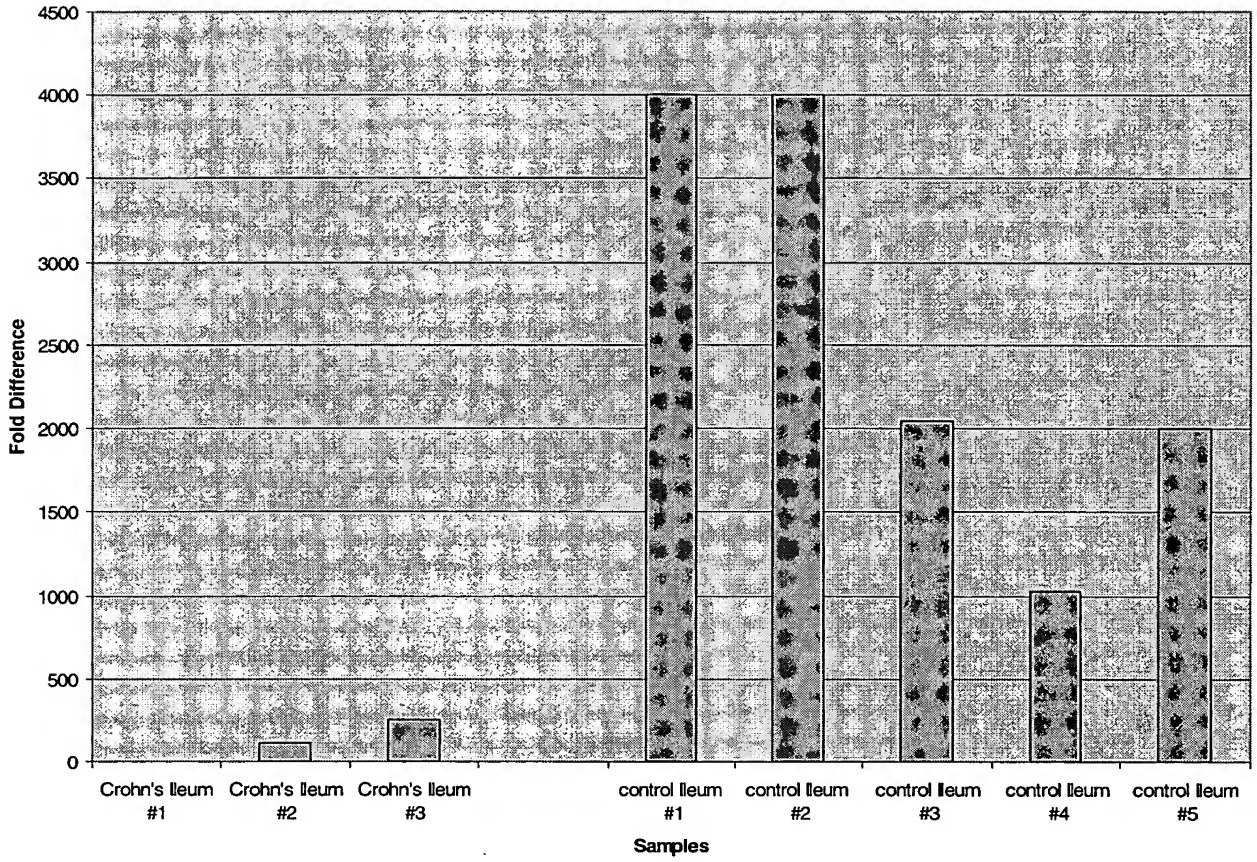

Fig.10 MGAT3 Gene is Located on Chromosome 7q22.1